

Haliaeetus leucocephalus

Eagle ulna - Proximal end

Haliastur:— Largest (except Morphnus)
Proximal end at (a)

(b) Not long
and narrow as
in *S. sinuella*.

(b) smaller and more like Aquila, but more deeply indented and flattened at lower end instead of round as in (4)

* Distinctness of surface - particularly noticeable against obscuration process. Surface appears smoothed.

(4)

50

Morphus? - Large, but (a) not marked like
Halleaks, (b) roughness not much indented
(d) More indented than in H(?) ~~distinct sides along outer edge~~

Ulua - Eagle Biquila

	A	B
2320	11.2	14.0

June 1927

Lam

Eagle Immature

Haliaeetus leucrocephalus

	a	b	c	d	e	h	i
C 7193		82.2	32.1	37.4	19.3	37.2	
C 5159		79.1	32.7	36.9	18.9	36.2(?)	
C 971		86.7	36.8	41.5	22.3	40.3	
C 7331		88.5	36.2	41.0	21.0	42.7	
C 4606		90.3	—	41.5	21.8	42.3	
C 971		86.5		41.7		40.2	
C 944		86.1		39.4		40.5	
C 6245		83.0		38.7		38.9	
C 7191		81.6	35.0	38.5	20.0	39.1	
C 4181		79.0		37.9		39.1	
B 9240		82.5		39.5		39.1	
B 8382		87.2		42.8		42.9	
C 4008		87.8		42.0		39.7	
		85.5		42.1		40.9	

Halimolobos Depth Length (cm)

D5853	29.4	24.9
C1998	27.8	27.2
D5709	25.5	23.8
C3662	26.8	27.0
D814	26.0	25.9
C2049	25.9	26.4
D5472	25.9	24.3
D2732	22.7	21.4

D6198, D797, C70, F3092,
 C7632, D1143, C547, C7715,
 C7114, D5709, C3010, C9504
 B8721

C1535 21.9 12.0

D4639 23.5 11.7

D3225 19.4 17.3 12.3

D4640 18.4 16.3 12.2

C5556 15.6 12.5 11.3

21.5 - 21.4 - 12.0

27.4 - 29.4 - 15.5 ^{breadth} average breadth

D2911 21.7 16.1 14.7

C2283 21.4 18.7

D3207 20.4 15.8

C3267 23.7 17.0

C5071 20.5 15.8

D2409 21.5 16.7

D3688 21.2 17.8

C2089 20.2 15.3

D3218 20.9 16.7

C2183 21.8 21.6 12.2

F3071 18.2 15.5 11.3

D1077 19.6 13.4 13.8

D855 22.5 15.0 14.5

D1147 19.7 17.1 11.1 +

E3678 15.7 14.4 10.5 ?

E850 16.3 14.5 11.4 ?

P. f. pilis?

832¹/₄ | 626⁴ | 291 | 222² 944³ } may ~~La Brea~~ min.

Coracoid	80.2	69.1		74.3	83.7	68.3
Humerus	226.5	196.5	228.0	215.5	243	204,
Ulna	250.0	—	265.0	246.0	279.5	240
Carpus	115.1	—	119.9	107.4	126.8	103.6
Metacarp	126.1	112.2	125.8	121.3	129.2	111.8
Tibia	168.5	—	166.5	157.0	174	150
Tarsus	97.1	87.9	97.1	94.3	103.3	84.7
Length wing	591.6	—	642.9 644.9	566.9	698.4	577.6
Length leg	391.7	—	389.4	372.4	406.5	346.5
Ratio humerus to ulna	90.6%	—	86.1%	86.5%	87.0	85.0
Ratio femur to humerus	55.6%	57.1%	55.1%	56.8%	53.2 54.6	54.6 52.3
Ratio cor. to wing	13.5%	—	—	13.1	12.8	12.5
Ratio cor. to leg	20.4%	—	—	19.9	20.5 19.7	19.7
Ratio leg to wing	66.2%	—	64.6%	65.7	62.6	63.4

Halacetus

Halaeetus leucorhynchus

138
4/5'54"
30
4/1220

Rancho La Brea
max. min.

Recent

			Lam 291 l. glaucus estimated 79.1	MVZ 28326 80.2	ORD 22944 l. leuco 74.6	Lam 32 626 min. 74.5	
Coracoid	83.7	68.5					69.1
Humerus	243.0	204.0	228.0*	226.5	214.0		196.5
Ulna	279.5	240.0	265.0*	250.0	246.5		
Carpus	128.3	103.6	121.7*	115.1	108.7		
Tarsus	129.2	111.8	125.8	124.1*	121.8	117.0	112.2
Fibula	174.0	150.0	166.5	168.5*	156.5	estimated 150.2 + tarsus = 27.5% of hla, ap.	
Tarsus	103.3	84.7	97.1	97.1	93.8		87.9
Leg	406.5	346.5	389.4	391.7*	372.1	estimated 350.3	
Wing	650.8	547.6	614.7*	593.0	569.2		
Humerus	87.0%	85.0%	86.1%	90.6%			57.1
Ulna			55.1	55.6			
Tars. hum.	53.2	54.6		13.5			
Cor. to wing	12.7	12.5	estimated 12.7				19.5
Cor. to leg	20.65	20.1	estimated 20.3	20.4			
leg to wing	62.4	63.4	63.3	66.0			

* = max

$$\begin{array}{r} 19 \\ 3465 \overline{) 6850} \\ \underline{3465} \\ 33850 \end{array}$$

$$\begin{array}{r} 406.5 \overline{) 8370} \\ \underline{8130} \\ 2400 \end{array}$$

$$\begin{array}{r} 66.2 \\ 594 \overline{) 39170} \\ \underline{35496} \\ 36740 \\ \underline{35496} \\ 12440 \\ \underline{11880} \\ 560 \\ 624 \end{array}$$

Haliaeetus modicus

Humerus

MWZ 8326 226.5 -

Lam 291 228.0 x

St Mill 626 196.5

Ulna

MWZ 8326 250.0

Lam 291 265.0 x

Carpus

MWZ 8326 116.5 -

Lam 291 121.7 x

Tarsus

MWZ 8326 126.1 -

Lam 291 125.8 x

St Mill 626 112.2

Lam 32 116.8

^{8326:} Leg 391.7 - 291: 389.4

Wing 8326: 593.0 - 291: 614.7

Tars. to hum.

8326: 55.6% - 291: 55.1% - 626: 57.2

Hum. to ulna -

8326: 90.6% - 291: 86.1

Cor. to leg

8326: 22.4

Cor. to wing

8326: 13.5% - 291: 13.5%

Leg to wing

8326: 66.0 - 291: 63.2

Tibia

MWZ 8326 168.5 -

Lam 291 166.5 x

Tarsus

MWZ 8326 97.1 -

Lam 291 97.1 x

St Mill 626 87.9

Coracoid

MWZ 8326 80.2

St Mill 626 69.1

Lam 32 74.1

Nal. Tarsus

Length	Breadth	Depth	Width	Height	Length	Width	Height	Length	Width	Height	Length	Width	Height
84.7	11.0	12.9	20.4	24.0	23.3	26.5	20.8	24.5	min. La Brea	04699			
103.3	12.8	12.3	23.7	22.9	27.5	26.6	25.5	24.6	max La Brea	D6541			
97.1	11.6	11.9	22.8	23.4	25.9	26.6	23.9	24.6	8326				
92.1	12.3	12.6	24.1	24.8	26.8	27.6	25.4	26.1	291				
87.9	10.7	12.1	20.8	23.6	22.8	25.9	20.2	22.9	624				

Summers

204.0	13.2	64.7	36.6	17.9	33.4	16.3
243.0	16.2	66.7	43.4	17.8	40.9	16.8
226.5	16.6	73.4	40.8	17.9	37.9	16.7
228.0	16.8	73.7	41.8	18.4	39.5	17.3
196.5	14.2	72.3	35.2	17.9	32.9	16.7
237.5	16.4	69.1				
222.5	17.0	76.4				
225.5	15.8	70.3				

min. R.B. C5159

max. " 16, 9-12

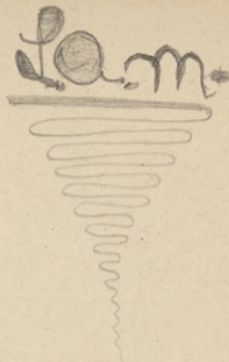
8326

291

624

4, F+5, 12-13

Haliaeetus leucorhynchus
China



	Length
C 3545	279.3 mm.
D 1969	229.7

Material available. - Eighteen complete;
(counting 3 questioned)
80 distal; 76 proximal (not counting 3 questioned)
modern Length
Bi 29 (Lam) 264.1 mm.

Halaeetus leucogaster. skull

	Recent								
	291	1660	1503	1279	K3123	C1213	C5682	C3744	D739
for p.o.	62.4	65.7	49.8	56.8	62.7	66.7	70.5	65.6	63.7
for beak	47.5	43.4	36.7	38.5	44.3	47.5	46.0	45.5	46.1
for p.o. point	48.2	46.0	38.0	37.1	43.0	—	45.8	44.6	46.2
for tip	30.0	29.8	22.3	23.4	—	—	30.4	29.2	28.3
for oc.	31.2	27.5	26.3	25.0	24.9	—	30.3	31.1	31.4
for cran.	39.3	38.0	33.7	—	39.0	—	39.0	—	38.2
length cran.	70.4	66.0	56.2	58.7	65.5	69.2	71.0	—	70.5
for temp. scan	28.7	23.0	29.5	26.7	25.8	27.0	24.3	23.6	28.4

					K4127	C3662	C2049	B8721	C3010	D814	D5709	C9504	D797	F3092
length beak	40.0	37	27.2	29.1	36.3	42.6	39.4	37.3	43.0	40.5	—	—	—	35.1
for below	24.1	21.4	15.0	17.7	—	16.1	25.1	21.0	25.7	24.0	21.3	24.1	22.7	22.2
for beak	26.6	26.3	17.1	17.6	23.6	27.0	25.7	23.1	26.0	25.4	24.0	24.7	24.2	22.4
length	22.8	21.0	15.0	14.4	21.8	—	—	21.1	—	21.13	20.7	—	—	—
for	60.3	57.8	—	—	—	61.2	63.6	56.3	59.7	59.3	—	—	—	63.3
ca	66.5	71.2	—	—	65.0	63.3	65.5	62.0	60.5	62.7	—	—	—	63.8
da	56.9	56.7	—	—	57.3	—	—	56.9	—	52.2	—	—	—	—
cc	90.6	81.6	—	—	—	96.7	97.6	90.9	98.7	94.5	88.8	—	—	94.7